

Notice of Allowability

Application No.

10/743,727

Applicant(s)

MIKAMI, SHOUGO

Examiner

Art Unit

Kuen S. Lu

2167

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 7/27/06.
2. ☒ The allowed claim(s) is/are 1-2, 5-8, and 11-13 (renumbered to 1-9).
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date 12/24/03, 5/16/05
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 9/11/2006.
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

1. In view of Applicant's Amendments made to claims 1-2 and 8, dated July 27, 2006, the 35 U.S.C. § 112, second paragraph rejection of the claims made in the non-Final Office Action of April 27, 2006, is hereby withdrawn.
2. After a thorough search and examination of the present application and, in light of a telephone interview conducted September 11, 2006 and the prior art made of record, Claims 1-2, 5-8 and 11-13 (renumbered to 1-9) are allowed.

Information Disclosure Statement

3. Applicant's Information Disclosure Statement filed December 24, 2003 and May 16, 2005 is acknowledged. Corresponding IDS-1449s are electronically signed as attached.

Examiner's Amendments

4. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this Examiner's amendment, listed below, was given in a telephone interview with Mr. Daniel J. Stanger (Registration Number 32,846) on September 11, 2006. The interview summary is attached.

Please amend claims 2-5 and 8-11 as follow:

2. (Currently Amended) A replication-data management method whereby, using a computer connected to a storage apparatus for executing a backup by copying data from each original volume into each duplicate volume corresponding thereto upon receiving pair information, said pair information including each original-volume name and each duplicate-volume name corresponding thereto, wherein replication data stored in said each duplicate volume is managed by said execution of said backup,

said computer holding a first table and a second table, wherein files as backup objects are classified into plural groups, each corresponding to a respective user business, said first table is designed for storing file names in a manner of being made to correspond to each group name, said file names being included in said each group, and said second table is designed for storing said file names and said group names in a manner of being made to correspond to said duplicate-volume names,

said replication-data management method comprising a step of:

when transmitting said pair information to said storage apparatus in response to the receipt of a specified first group name, said pair information including a first original-volume name and a first duplicate-volume name corresponding thereto, said first original-volume for storing therein a first file, storing said first file name and said specified first group name into said second table in a manner of being made to correspond to said first duplicate-volume name;

when transmitting said pair information to said storage apparatus in response to a receipt of a specified second group name, said second group including said first file, said pair information including said first original-volume name and a second duplicate-volume name

corresponding thereto, said first original-volume for storing therein the data of said first file, extracting said first duplicate-volume name by making reference to said second table, and copying the first file into the first duplicate-volume;

extracting said first group name stored in said second table in a manner of being made to correspond to said extracted first duplicate-volume name; and

wherein

said first table stores therein each policy, said each policy being a method for managing said replication data in a manner of being made to correspond to said each group name,

said computer holding a third table for storing flags in a manner of being made to correspond to said duplicate-volume names for storing said replication data, said flags indicating whether or not said duplicate volumes are available, and

said replication-data management method further comprising the steps of:

judging whether or not said policy satisfies a predetermined condition, said policy being stored in said first table in a manner of being made to correspond to said extracted first group name; and,

determining, depending on the judgment result, whether or not said flag should be stored into said third table, said flag indicating that said first duplicate volume is available.

3. (Currently Canceled)

4. (Currently Canceled)

5. (Currently Amended) The replication-data management method according to Claim 4-2, wherein said step of judging whether or not said policy satisfies said predetermined condition is a step of judging whether or not said policy has a flag, said flag indicating that only data in the newest state is necessary for a file backed up with said group specified, said group being made to correspond to said policy.

8. (Currently Amended) A computer connected to a storage apparatus for executing a backup by copying data from each original volume into each duplicate volume corresponding thereto upon receiving pair information, said pair information including each original-volume name and each duplicate-volume name corresponding thereto,

said computer comprising:

a memory unit for holding a first table and a second table, wherein files becoming backup targets are classified into plural groups each corresponding to a respective user business, said first table being designed for storing file names in a manner of being made to correspond to each group name, said file names being included in said each group, said second table being designed for storing said file names and said group names in a manner of being made to correspond to said duplicate-volume names; and

a volume setting unit for executing a steps of:

when transmitting said pair information to said storage apparatus in response to a receipt of a specified first group name, said pair information including a first original-volume name and a first duplicate-volume name corresponding thereto, said first original-volume for storing therein a first file, storing said first file name and said first group name whose

specification has been received into said second table in a manner of being made to correspond to said first duplicate-volume name;

when transmitting said pair information to said storage apparatus in response to a receipt of a specified second group name, said second group including said first file, said pair information including said first original-volume name and a second duplicate-volume name corresponding thereto, said first original-volume for storing therein the data of said first file, extracting said first duplicate-volume name by making reference to said second table, and copying the first file into the first duplicate-volume;

extracting said first group name stored in said second table in a manner of being made to correspond to said extracted first duplicate-volume name; and

wherein

said first table stores therein each policy, said each policy being a method for managing said replication data in a manner of being made to correspond to said each group name,

said memory unit holding a third table for storing flags in a manner of being made to correspond to said duplicate-volume names for storing said replication data, said flags indicating whether or not said duplicate volumes are available, and

said computer comprising said volume setting unit for further executing the steps of:

judging whether or not said policy satisfies a predetermined condition, said policy being stored in said first table in a manner of being made to correspond to said extracted first group name; and,

determining, depending on the judgment result, whether or not said flag should be

stored into said third table, said flag indicating that said first duplicate volume is available.

9. (Currently Canceled)

10. (Currently Canceled)

11. (Currently Amended) The computer according to Claim ~~40~~ 8, wherein said step of judging whether or not said policy satisfies said predetermined condition is a step of judging whether or not said policy has a flag, said flag indicating that only data in the newest state is necessary for a file backed up with said group specified, said group being made to correspond to said policy.

Reasons For Allowance

5. The following is an examiner's statement of reasons for allowance:

In the Examiner's Office Action for non-Final Rejection of April 27, 2006, 35 U.S.C. 35 U.S.C. § 103, rejections was primarily based on the reference of VERITAS NetBackup™ DataCenter 4.5, System Administrator's Guide for UNIX, March 2002, hereafter "NetBkp"; and in view of VERITAS Volume Manager™ 3.2, Administrator's Guide, Solaris, August 2001, hereafter "VM32".

In the Remarks filed on July 27, 2006, the Applicant specifically pointed out that the cited VERITAS NetBkp and VM32 references either individually or in combination does not teach the claimed feature of replication, as described and implemented in great detail in each of

independent claims 1, 2 and 8, where data and the volume storing the replication data is flexibly managed according to the needs of the user (business), whereby the invention classifies the data (files) into groups according to the user business, and performs backup/restore operation in units defined by the groups.

An updated search for the prior arts on EAST database and on domains (NPL-ACM, Google.com, NPL-IEEE) has been conducted. The prior arts searched and investigated in the database and domains does not fairly teach or suggest the teaching of the claimed subject matter as described above and reflected by the combined elements in each of the independent claims 1, 2 and 8.

The dependent claims in the groups (5-7) and (11-13), depending claims 2 and 8, respectively, also distinct from the prior art for the same reason.

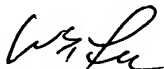
6. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Contact Information


7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kuen S Lu whose telephone number is (571) 272-4114. The examiner can normally be reached on Monday-Friday (8:00 am-5:00 pm). If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, John Cottingham can be reached on (571) 272-7079. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for Page 13 published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 886-217-9197 (toll free).

Kuen S. Lu, 
Patent Examiner, Art Unit 2167

September 12, 2006


JOHN COTTINGHAM
SUPERVISORY PATENT EXAMINER
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